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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/076,269

02/19/2002

Atsushi Umeda

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25944 7590 06/17/2003

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ALEXANDRIA, VA 22320

EXAMINER

PHAM, LEDA T

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 06/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/076,269	UMEDA, ATSUSHI	
	Examiner	Art Unit	
	Leda T. Pham	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In this claim, "the number of turns in each slot is fixed to the integer number and another integer number less than the integer number by one" is confusing. The examiner does not understand what is "another integer number"? Does this number also define for the number of turns in the slot? If so, please rewrite the claim language to make it clear for examination.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1- 3, 7- 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kusase et al (U.S. Patent No. 5,122,705) in view of Fogarty (U.S. Patent No. 6,455,974 B1).

Referring to claim 1, Kusase teaches a rotary electric machine (figure 1) comprising a stator core having a plurality of slots (figure 3) and a multi-phase winding including a plurality of phase windings wound in the slots at predetermined angular intervals (figure 9 - 10).

However, Kusase does not teach one end of one of the phase windings is connected to a middle

point other than both ends of another one of the phase windings in a cyclic manner among the phase windings.

Fogarty teaches a rotary electric machine having delta and wye connection winding (figure 7) wherein one end of one of the phase windings is connected to a middle point other than both ends of another one of the phase windings in a cyclic manner among the phase windings (column 6, lines 55 -60) for fine adjustment of voltage level output.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the phase winding connection as taught by Fogarty. Doing so would have a fine adjustment of voltage level output in electric rotary machine.

Referring to claim 2, Kusase teaches the rotary electric machine wherein the multi-phase winding has a plurality of electric conductor segments connected in series (figure 6) and each of the slots receives therein generally a same number of the conductor segments (column 11, lines 19 - 23).

Referring to claim 3, Kusase teaches the rotary electric machine wherein the multi-phase winding includes two sets of three-phase windings having a phase difference of $\pi/6$ in an electric angle from each other (column 5, lines 4 -7).

Referring to claim 7, Kusase teaches the rotary electric machine further comprising a rectifier device for rectifying voltages induced in the multi-phase winding, wherein another end of each of the phase windings is connected to the rectifier device (figure 6).

Referring to claim 8, Kusase teaches the claim invention except for the added limitation of one end of each of the phase windings is connected to a mid-point of another of the phase windings to form a delta connection of the phase windings.

Fogarty teaches a rotary electric machine having delta and wye connection winding (figure 7) wherein one end of one of the phase windings is connected to a middle point other than both ends of another one of the phase windings in a cyclic manner among the phase windings (column 6, lines 55 –60) for fine adjustment of voltage level output.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the phase winding connection as taught by Fogarty. Doing so would have a fine adjustment of voltage level output in electric rotary machine.

Referring to claim 9, Kusase teaches the rotary electric machine further comprising a stator core having a plurality of slots for receiving the multi-phase windings therein, wherein each of the phase windings includes a plurality of electric conductor segments connected in series with, and wherein a number of the electric conductor segments received in each of the slots is fixed to an integer number (column 11, line 19 – 23).

Referring to claim 10, Kusase teaches the rotary electric machine comprising a stator core having a plurality of slots, a multi-phase winding including a plurality of phase windings received in the slots, a number of turns of each of the phase windings in each of the slots being fixed to an integer number; and a rectifier device connected to the phase windings, wherein the phase windings are connected to one another in a predetermined form of a Y-connection and a delta-connection to provide an output which is intermediate between two outputs which the rectifier device provides when the phase windings are connected in the Y-connection and the number of turns in each slot is fixed to the integer number and another integer number less than the integer number by one.

5. Claims 4 -6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Kusase and Fogarty as applied to claim 1 above, and further in view of Umeda et al (U.S. Patent No. 6,137,201).

Referring to claim 4, the combination of Kusase and Fogarty reference teaches the claim invention except for the added limitation of the electric conductor segments are connected together through respective end portions.

Umeda teaches a rotary electric machine having plurality of electric conductor segments that are connected together through respective end portions (figure 6) for avoiding interference between different phases at the coil end.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the end portions of the electric conductor segments as taught by Umeda. Doing so would avoid interference between different phases at the coil end.

Referring to claim 5, Umeda teaches the rotary electric machine wherein the electric conductor segments each has a rectangular sectional shape (figure 8).

Referring to claim 6, Umeda teaches the rotary electric machine wherein the electric conductor segments each has a substantially same sectional shape (figure 8)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leda T. Pham whose telephone number is (703) 305-4864. The examiner can normally be reached on M-F (7:30-5:00) first Friday Off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3431.

Leda T. Pham
Examiner
Art Unit 2834

LTP
June 9, 2003

A handwritten signature in black ink, appearing to be 'LTP', located below the typed name of the examiner.